Image Install Guide (DEBIX SOM A I/O Board)

Software Installation

① Download Image

1. Download the latest system image from the software download page of DEBIX official website;

IMPORTANT

> The boot type of the image downloaded depends on which boot mode image you choose to install. For example, if you need to install an image with eMMC boot mode, you can choose the image name with (eMMC Flashing).

2. If the downloaded image file is a zip file, you need to decompress it into an .img file;
3. Write the .img file into the Micro SD card by balenaEtcher tool.

② System Boot

DEBXI SOM A + I/O Board has three boot modes: eMMC (default), Micro SD card, SPI Nor Flash (reserved).

A. Boot from Micro SD

- **Component Preparation**

✓ DEBIX SOM A + I/O board

✓ Micro SD card, and card reader

✓ DC 12V/3A power adapter

✓ PC (windows 10/11)

- **Installing the Boot from Micro SD Card Image**

On the DEBIX official website, choose to download Ubuntu 22.04 Boot from SD Card image link: Debix-SOMA-SD-V2.4-202XXXXX.img, as shown below.

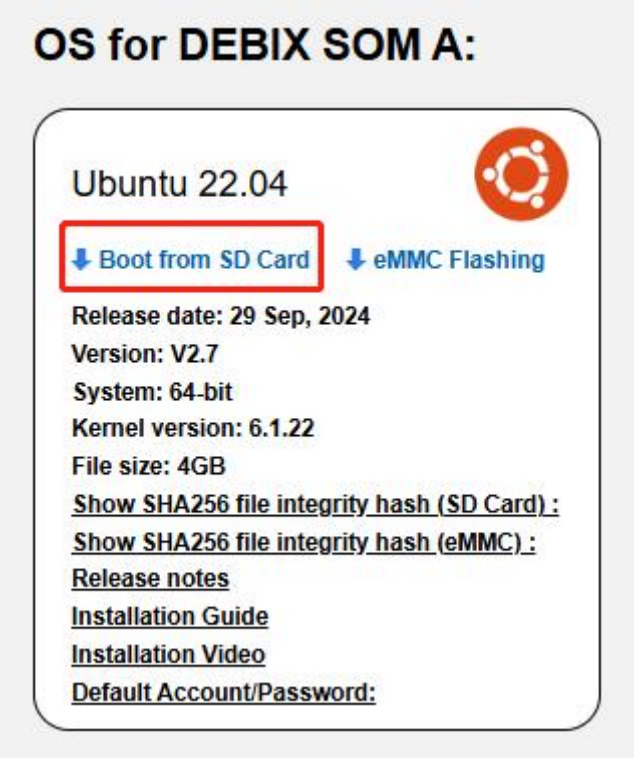


Figure 1

1. Install and open the Etcher tool on your PC, insert the Micro SD card, select the img file to be installed and the disk partition corresponding to the Micro SD card;

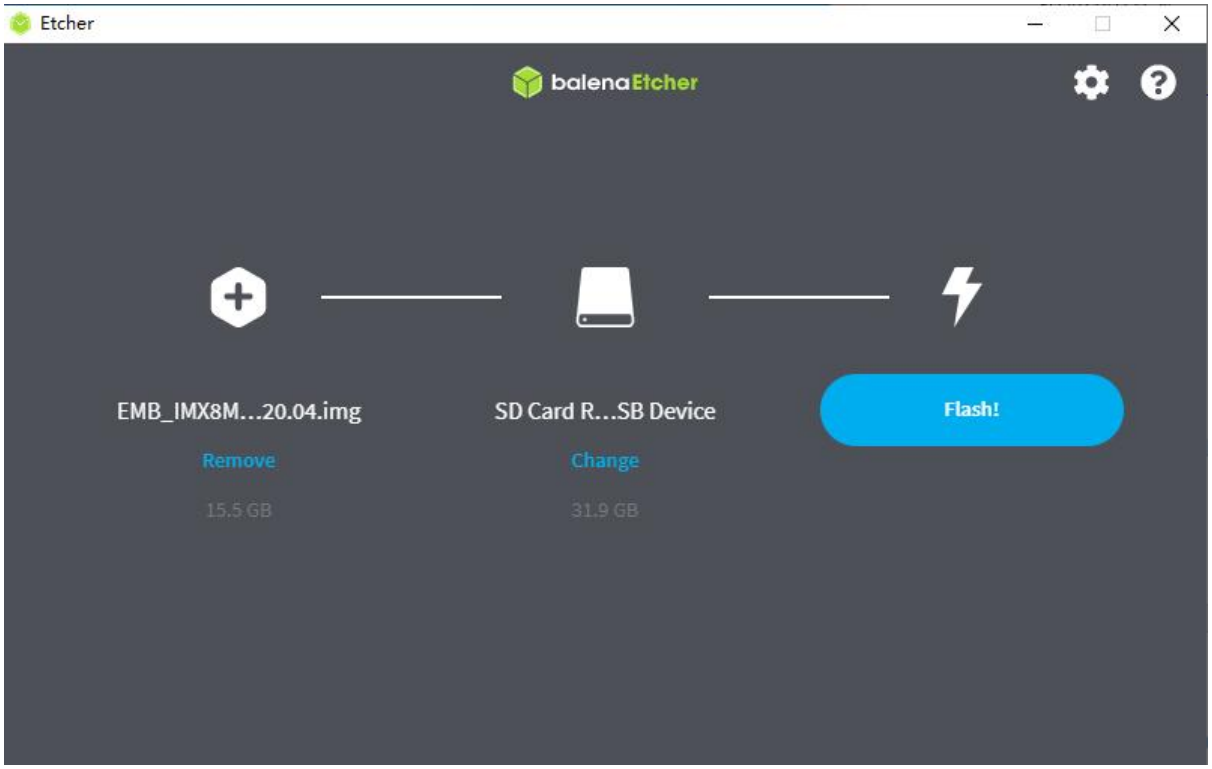


Figure 2

2. Click **Flash!** Wait patiently and the program will write the system to the Micro SD card;

NOTE

The system may prompt you that the disk is unavailable and needs to be formatted, please ignore it, it is not an error!

3. When **Flash Complete!** appears, it means the system has been successfully programmed to the Micro SD card;

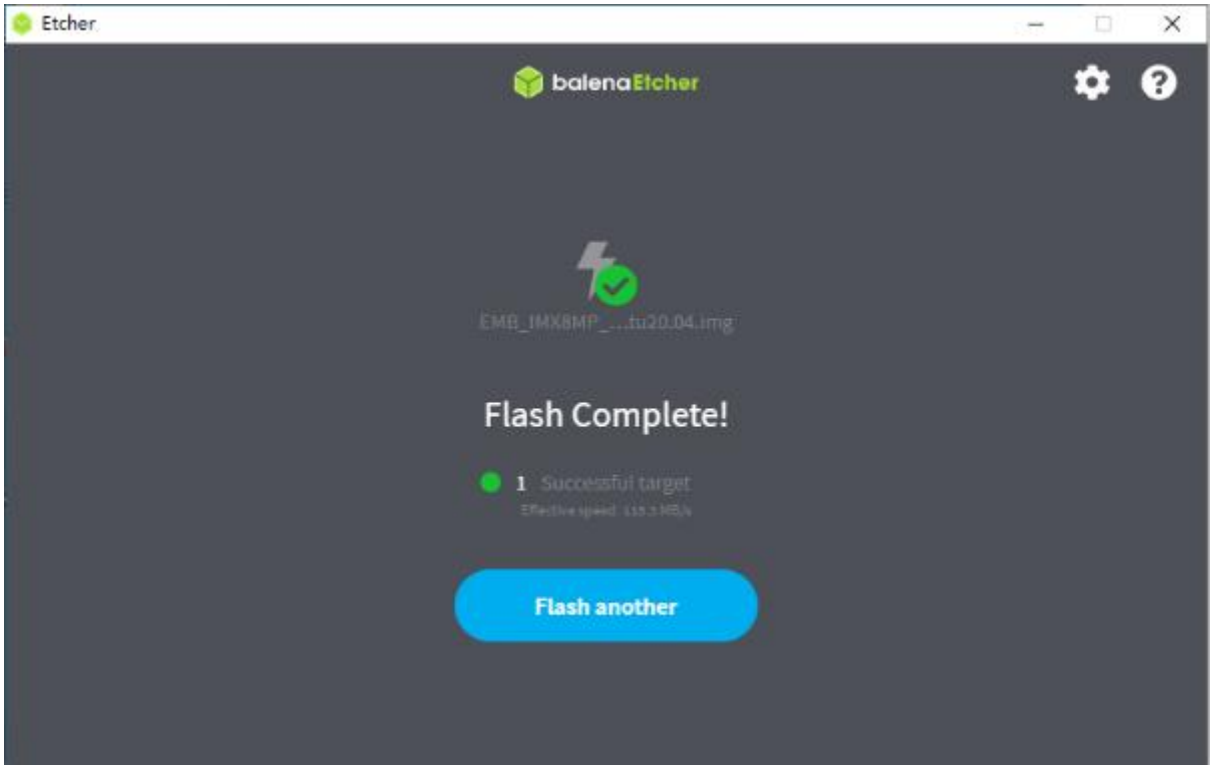


Figure 3

4. Set the DIP switch to "0011" (boot from the Micro SD card).
5. Insert the Micro SD card into the slot of DEBIX SOM A I/O Board, connect the display and power on, then you can see the boot screen.

B. Boot from eMMC (default)

- **Component Preparation**

✓ DEBIX SOM A + I/O board

✓ Micro SD card above 16GB, and card reader

✓ DC 12V/3A power adapter

✓ PC (windows 10/11)

- **Installing the Boot from eMMC Image on the Micro SD Card**

On the DEBIX official website, choose to download Ubuntu 22.04 Boot from eMMC image link: Debix-SOMA-SD-UPGRADE-EMMC-V2.4-202XXXXX.img, as shown below.

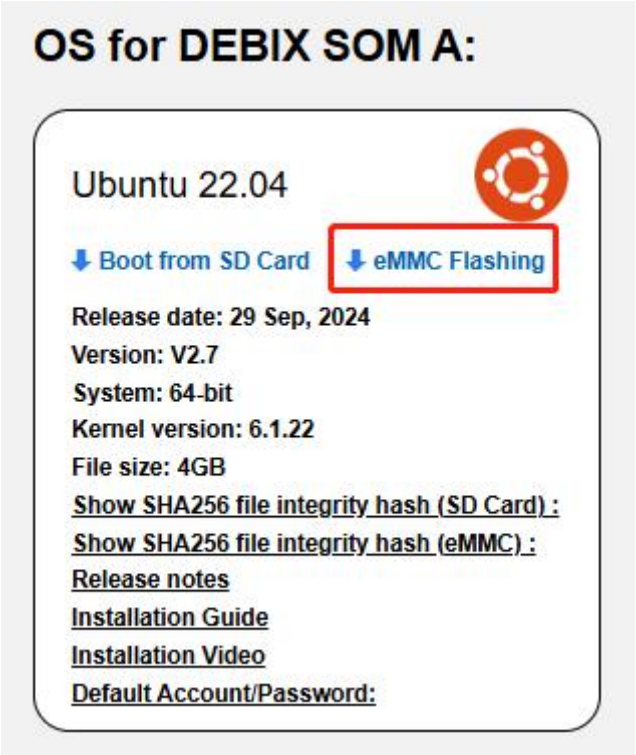


Figure 4

Write the downloaded system image to the Micro SD card, and set the DIP switch to Micro SD card boot mode according to the steps 1-4 operation of "Boot from Micro SD Card". Then burn it to eMMC with the following steps:

1. Insert the Micro SD card into DEBIX SOM A I/O board, and power on. The system will automatically write to eMMC through the Micro SD card, this burn process will not be displayed on screen. When burning, the green LED on the motherboard will flash quickly, please wait. When the green LED changes from fast flash to slow flash, that is, the programming is complete.

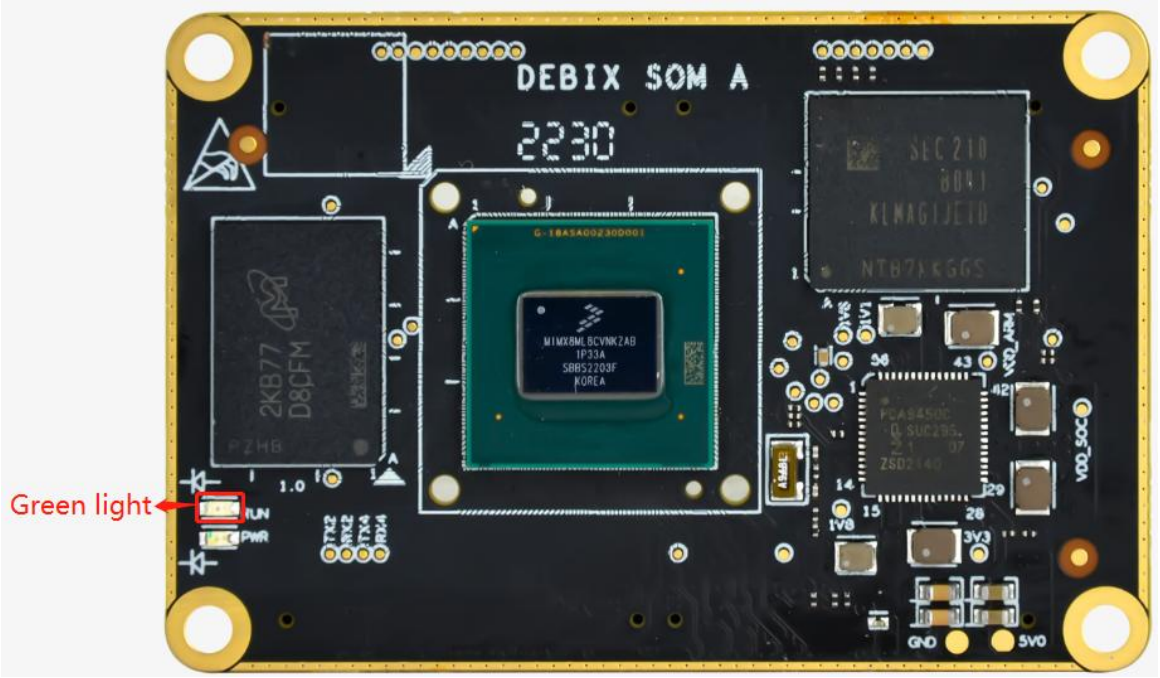


Figure 5

IMPORTANT

If the system with the same version as the Micro SD card has been burned to eMMC, the system will not be burned again, and the indicator light will not flash quickly.

If you need to flash the eMMC system again, you need to format the eMMC first. Proceed as follows:

1) Connect the motherboard to the keyboard, mouse and HDMI display, set the DIP switch to "0011" to start the system from the Micro SD card, and power on.
2) In the Terminal, enter the default username “debix” and password "debix" to enter the command line, and run the following commands (as shown in the figure below):

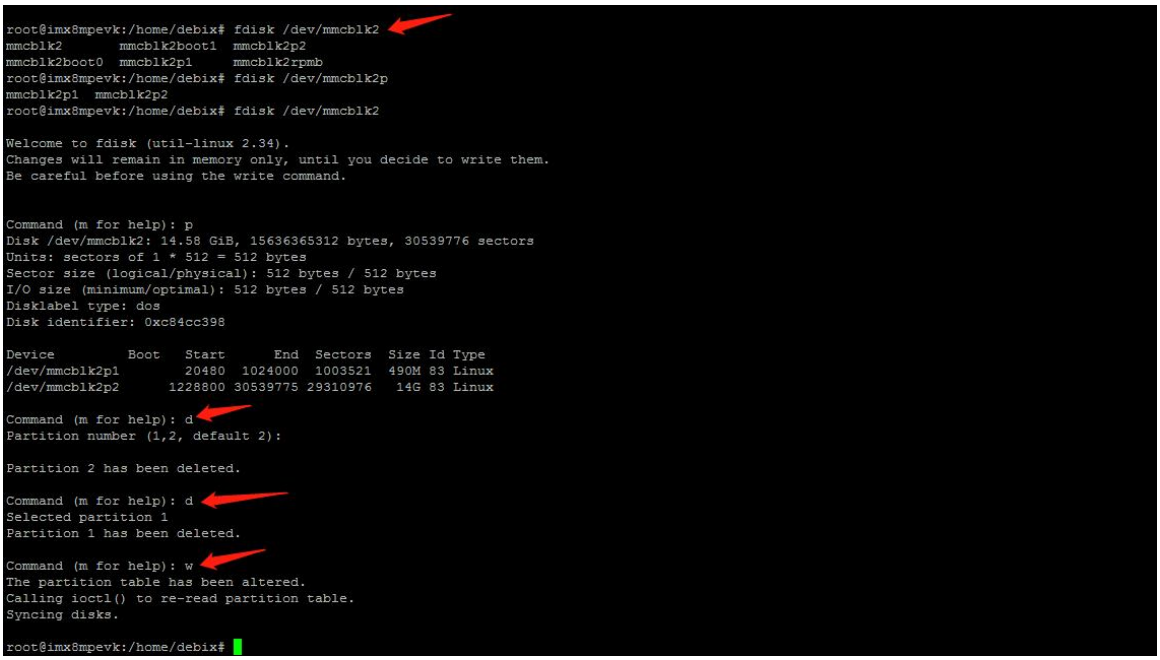
   #sudo su (password: debix)

   #fdisk /dev/mmcblk2

   d

   d

   w
3) Repeat step 2 to burn the system to eMMC again.



2. Disconnect the power supply, and set the DIP switch to "0010", the system will boot from eMMC, connect to HDMI and power on, then you can see the boot screen.

C. USB Flash

- **Component Preparation**

✓ DEBIX SOM A + I/O board

✓ Dual Male USB Type-A data cable

✓ DC 12V/3A power adapter

✓ PC (windows 10/11)

- **Burning to eMMC via USB**

1. Download the system installation package and UUU tool we provided to DEBIX, check the MD5 match after downloading, and then unzip it to PC;

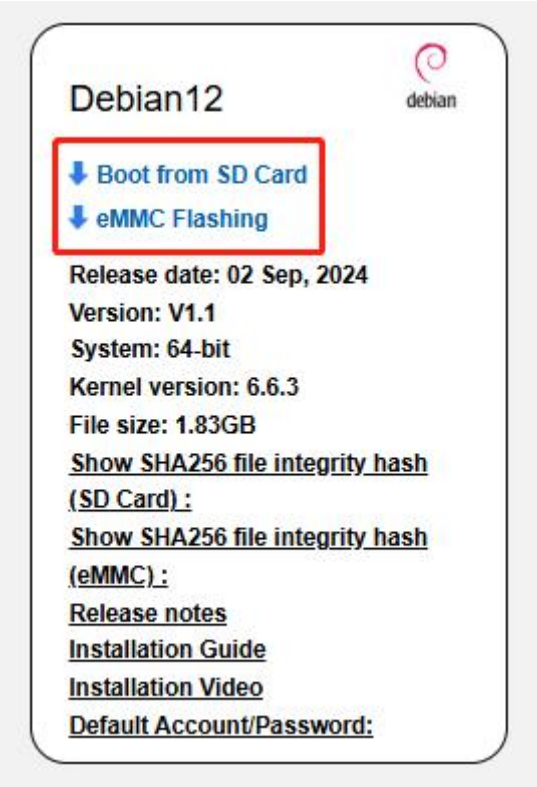


Figure 6

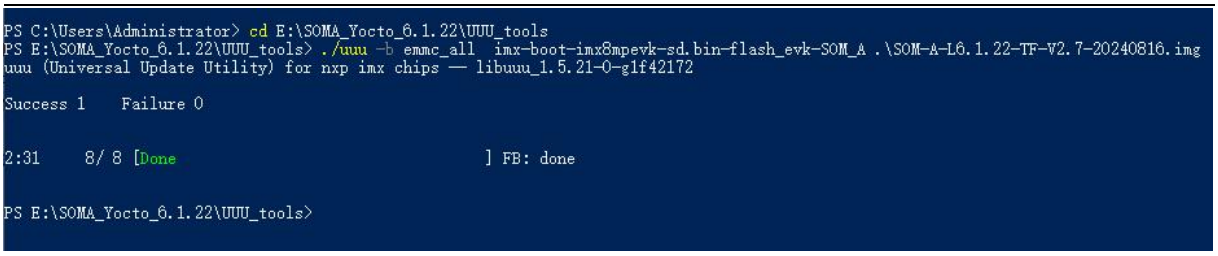
2. Use USB cable to connect the OTG port of DEBIX SOM A I/O Board to the USB port of PC, set the DIP switch to "0001" or press built-in key, connect the power supply, the system will enter the USB burning mode;
3. Run **Windows PowerShell** as administrator;
4. Type cd command to enter the root directory of the system installation package, for example:

```
cd E:\SOMA_Yocto_6.1.22\UUU_tools
```

5. Run the following command to download the file and start burning the system to eMMC;

```
./uuu -b emmc_all imx-boot-imx8mpevk-sd.bin-flash_evk-SOM_A SOM-A-L6.1.22-TF-V2.7-20240816.img
```

6. Wait for the system burning to finish; when the terminal shows green "Done", it means the burning is finished;



7. After burning, disconnect the power supply and OTG USB cable, make sure the DEBIX is completely powered off, and then connect the power supply to start.